



Degradation of VDMOSFET by Heavy Ion Irradiations

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This article focuses on the effect of the heavy ions irradiations on the electrical characteristics of VDMOSFET (Vertical Diffusion Metal Oxide Semiconductor Field Effect Transistor) devices. A summary of the total dose effects and the single event effects is covered to evaluate the experimental observations. Device degradations due to the hot carriers junction avalanche are studied by a physical parameters extraction method, leading to an understanding of the degradation processes. Results show that a protective resistor load can reduce the degradation effect in the device.

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